



US009511084B2

(12) **United States Patent**
Cheng et al.

(10) **Patent No.:** **US 9,511,084 B2**
(45) **Date of Patent:** ***Dec. 6, 2016**

(54) **COMPOSITIONS INCLUDING TRICIRIBINE
AND METHODS OF USE THEREOF**

16/2863 (2013.01); *A61K 2039/505* (2013.01);
C07K 2317/24 (2013.01); *C07K 2317/76*
(2013.01)

(71) Applicant: **University of South Florida**, Tampa,
FL (US)

(58) **Field of Classification Search**

None

See application file for complete search history.

(72) Inventors: **Jin Q. Cheng**, Tampa, FL (US); **Said
M. Sebti**, Tampa, FL (US)

(56) **References Cited**

(73) Assignee: **University of Florida**, Tampa, FL (US)

U.S. PATENT DOCUMENTS

(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.

4,123,524 A 10/1978 Townsend
5,681,970 A 10/1997 Didier et al.

(Continued)

This patent is subject to a terminal dis-
claimer.

FOREIGN PATENT DOCUMENTS

(21) Appl. No.: **14/514,311**

JP 2007-530705 11/2007
WO WO 2005/094322 10/2005

(Continued)

(22) Filed: **Oct. 14, 2014**

(65) **Prior Publication Data**

US 2015/0174149 A1 Jun. 25, 2015

OTHER PUBLICATIONS

Al-Janadi, Anas, et al.; "Activated Akt is Frequently Overexpressed
in Human Breast Cancer Cells and Its Blockade Can Inhibit
Growth," 2000 ASCO Annual Meeting, Proc Am Soc Clin Oncol,
19: 2000 (abstr 1879)

(Continued)

Related U.S. Application Data

(63) Continuation of application No. 13/463,576, filed on
May 3, 2012, now Pat. No. 8,901,086, which is a
continuation-in-part of application No. 12/992,556,
filed on May 18, 2011, now abandoned, which is a

(Continued)

Primary Examiner — Anna Pagonakis

(74) *Attorney, Agent, or Firm* — Seyfarth Shaw LLP

(51) **Int. Cl.**

A61K 31/7064 (2006.01)

A61K 31/282 (2006.01)

(Continued)

(57)

ABSTRACT

This invention encompasses combination therapies includ-
ing TCN, TCN-P, TCN-PM and/or related compounds and
one or more additional anti-cancer agents, for example,
taxanes a molecule that modulates the HER2/neu (erbB2)
receptor, anthracyclin compounds, epidermal growth factor
receptor inhibitor compounds, one or more platinum com-
pounds and bortezomib and derivatives thereof and compo-
sitions with reduced toxicity for the treatment and preven-
tion of tumors, cancer, and other disorders associated with
abnormal cell proliferation.

(52) **U.S. Cl.**

CPC *A61K 31/7064* (2013.01); *A61K 31/282*
(2013.01); *A61K 31/337* (2013.01); *A61K*
31/4353 (2013.01); *A61K 31/7076* (2013.01);
A61K 33/24 (2013.01); *A61K 39/39558*
(2013.01); *A61K 45/06* (2013.01); *C07K*

15 Claims, 45 Drawing Sheets

